

CALIFORNIA COASTAL COMMISSION

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Commission Action:

STAFF REPORT: REGULAR CALENDAR

APPLICATION NUMBER: 5-99-377

APPLICANT: California Department of Transportation

AGENT: Anthony Cole, Caltrans Dist. #7

PROJECT LOCATION: Vincent Thomas Bridge, Port of Los Angeles,

PROJECT DESCRIPTION: Permanent installation of 120 (200 to 1,125- watt) floodlights; four (7,000-watt) Xenon fixed beam Skytracker lights; and eight 8-foot in diameter parabolic reflective discs to an existing bridge (Vincent Thomas Bridge) that spans the northern portion of the main channel of the Los Angeles Harbor.

LOCAL APPROVALS RECEIVED: N/A

SUBSTANTIVE FILE DOCUMENTS: *Technical Report to Assess the potential impacts of the Vincent Thomas Bridge Lighting Project*, by California Department of Transportation, District 7; Categorical Exemption No. 991008 (CEQA).

SUMMARY OF STAFF RECOMMENDATION:

Staff is recommending approval of the proposed development with special conditions addressing protection of fauna and marine resources by limiting the duration of the skyward projecting lights to one evening only and ensuring that all lighting is directly focused on the bridge.

STAFF NOTE: The proposed coastal development permit application has been submitted to the Commission because the project is not listed in the port master plan as a permitted use. Since the project is not listed in the port master plan the Commission has permit authority. The proposed project is located within the jurisdictional boundary of the Port of Los Angeles and, as an improvement to an existing road or highway which is not principally for internal circulation within the port

boundaries, is an appealable project under Section 3015(a)(3). Therefore, the project will be evaluated for conformance with the Coastal Act by using the applicable Chapter 3 and Chapter 8 policies of the Coastal Act.

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution:

I. APPROVAL WITH CONDITIONS

The Commission hereby **GRANTS** a permit, subject to the conditions below, for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 and Chapter 8 of the California Coastal Act of 1976, and will not have any significant adverse effects on the environment within the meaning of the California Environmental Quality Act.

II. STANDARD CONDITIONS:

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date this permit is reported to the Commission. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. Period of Operation of the Xenon Skytracker Lights

Prior to the issuance of the permit the applicant shall agree in writing, subject to the review and approval of the Executive Director, that the four Xenon Skytracker lights, or similar skyward projecting lights, located at the top of each tower, shall operate only between the hours of 9:00 p.m. on December 31, 1999 to 6:00 a.m. on January 1, 2000. After that time, the lights may not be operated unless the Commission has approved an amendment to this permit to authorize such use. In order that the Commission may file the application for the amendment as complete, the applicant shall file the following information with the amendment:

(a) a detailed study, conducted by a qualified ornithologist or biologist with expertise in Southern California migratory birds, to identify the number of birds and the species that migrate through the area. The study shall address the impacts the high intensity lights may have on the migratory and resident birds of the area.

(b) written review and approval by the California Department of Fish and Game and the United States Fish and Wildlife Service or a statement in a form and content acceptable to the Executive Director that no approval is required.

2. Future Amendment Agreement

Prior to issuance of the permit the applicant shall agree in writing, subject to the review and approval of the Executive Director, that any future amendment, for the operation of Xenon Skytracker lights, or similar skyward projecting lights, will be based on Chapter 3 and Chapter 8 impacts and, therefore will not be based on the fact that the applicant will have already expended funds for the installation of the lights.

3. Future Bird Mortality

The applicant shall agree in writing, subject to the review and approval of the Executive Director, if any significant mortality of birds is observed, the lights shall be turned off immediately until the Coastal Commission, California Department of Fish

and Game, and the U.S. Fish and Wildlife Service are notified and an appropriate course of action is identified. Based on the course of action identified by the agencies, the Executive Director shall determine if an amendment to this permit is required.

IV. FINDINGS AND DECLARATIONS:

The Commission hereby finds and declares:

A. Project Description and Location

The applicant is proposing to permanently install 120 (200 to 1,125- watt) floodlights; four (7,000-watt) Xenon fixed beam Skytracker lights; and eight 8-foot in diameter parabolic reflective discs to an existing bridge (Vincent Thomas Bridge) that spans the northern portion of the main channel of the Los Angeles Harbor (see Exhibit No. 1 & 2).

The four 7,000-watt Xenon Skytracker lights will be located at the top of each bridge tower. The Xenon lights will be stationary, sending a vertical beam of light directly overhead into the night sky. In addition, at the top of each tower, there will be a sculptural element containing four (two per tower column or spire) 8-foot in diameter parabolic discs designed to reflect the light of the sun during the day and artificial light at night (see Exhibit No. 5).

The remaining floodlights will consist of individual and banks of lights at three separate locations along the towers; the base, the lower horizontal strut, and mid-tower levels (see Exhibit No. 3 & 4). The location and direction of the lighting, as proposed, will result in the illumination of the entire length of each tower. All proposed lighting is for decorative purposes to visually enhance the bridge at night.

The Bridge expands over the northern portion of the Los Angeles Main Channel in an east-west direction, connecting the San Pedro area of the City of Los Angeles with Terminal Island in the Port of Los Angeles (see Exhibit No.1). The Vincent Thomas Bridge is a 4-lane suspension bridge. The bridge is 1,500 feet long between towers, with back spans of approximately 506 feet on either side (see Exhibit No. 2). The two bridge towers, each tower consisting of two columns or spires, are located on land on either side of the Los Angeles Main Channel. The towers extend to a height of 335 feet above ground level (335 feet above sea level). The area immediately surrounding the bridge is primarily industrial, with cruise ship docks, cargo loading and storage yards and other port related facilities.

The bridge is part of State Route 47, which is under the jurisdiction of the California Department of Transportation, who is the applicant of this project. As an improvement to an existing road or highway, which is not principally for internal circulation within the port boundaries, the project is an appealable project under Section 3015(a)(3) of the Coastal Act. As an appealable project and a project located

within the jurisdiction of the port, the project will be evaluated for conformance with the Coastal Act by using the applicable Chapter 3 and Chapter 8 policies of the Coastal Act.

The sponsors of the project are the City of Los Angeles, Los Angeles Harbor Department, Department of Water and Power, Vincent Thomas Bridge Lighting Committee, and the Shuwa Corporation.

The initial lighting ceremony is scheduled to occur at 9:00 p.m. on December 31, 1999 in conjunction with the City of Los Angeles' millennium celebration. The lights will be a permanent installation, with the lights intended to be on nightly after the initial lighting from approximately sunset to sunrise. The proposed project has been scheduled for the November 1999, hearing at the request of the applicant, due to timing concerns on the part of the applicant. As a result of the limited time, Commission staff has not received written input from the California Department of Fish and Game or the United States Fish and Wildlife Service. Commission staff has spoken to the Dept. of Fish and Game and the Fish and Wildlife Service and they have both expressed initial concern with the lighting of the bridge and the potential adverse impact on birds. The Dept. of Fish and Game, however, has not had sufficient time to adequately review the project.

B. Public Comments

The South Coast District staff has spoken with The Urban Wildlands Group, Inc, who are opposed to the proposed project. The group is concerned with the impact the entire lighting project will have on migratory birds and other birds that frequent the area. They feel that the project is not necessary for the functioning of the bridge and the risk to birds is too great to allow lighting that is strictly for decorative purposes only. The group is preparing a letter for submittal to the Commission, however, because of the timing of this project, the letter was not ready for inclusion with this report.

Commission staff has also spoken to the local chapter of the Audubon Society. They are also opposed to the project for the same reasons and they are also preparing a letter for submittal to the Commission.

C. Environmental Resources

Chapter 3 Policies

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored.
Special protection shall be given to areas and species of special biological or

economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30240 of the Coastal Act states in part:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Chapter 8 Polices

Section 30708 (a) of the Coastal Act states:

All port-related developments shall be located, designed, and constructed so as to:

(a) Minimize substantial adverse environmental impacts.

The issue the proposed project raises is the potential impact the lights may have on the various bird species that migrate through the harbor, resident bird species, and to fish within the harbor.

The harbor and surrounding area is located along the Pacific Flyway. The Pacific Flyway is the path that migratory birds follow along the Pacific Coast during their annual migrations. Millions of shorebirds and waterfowl travel between northern breeding grounds and southern wintering sites. The Pacific Flyway originates in Western Alaska, around the Yukon River Delta, and extends as far south as Latin America. The peak periods for migration through southern California are March through May and August through October.

Both migratory shorebirds and neotropical songbirds either come to this area to breed or pass through here on their way to other locations. While the majority of shorebirds migrate during the day, there are some that fly at night. Most songbirds are nocturnal migrants. Wetlands and coastal bays are stopover sites for resting and feeding birds. Although there are no available studies about the nocturnal migrants that fly over the harbor area, approximately 100,000 to 1,000,000 birds use Seal Beach, which is approximately 20 miles to the south, as a major stopover, according to the Caltrans technical report (see Attachment No. 1).

The bridge itself is also home to a pair of American peregrine falcons (*Falco peregrinus*). According to the Caltrans report the peregrines nest/roost on the steel-girders below the bridges' roadway between the two towers.

The peregrine was recently removed from the federal endangered list. However, the peregrine is still protected under the federal Migratory Bird Treaty Act. As such, it is considered illegal to harm, harass or kill individuals of this species. The peregrine is also on the State's endangered list. The state Endangered Species Act protects listed species from being killed or harmed.

There have been many studies and reports that indicate that lights on tall structures can pose a problem for night migrating birds and cause mortalities among these birds (i.e. *Collision Course: The Hazards of Lighted Structures and Windows to Migrating Birds*, L.J.E. Ogden, September 1996; *The Effects of Overcast Skies on the Orientation of Free-flying Nocturnal Migrants*, K.P. Able, 1982; *The mechanisms of the trapping effect of artificial light sources upon animals*, F.J. Verheijen, Netherlands Journal of Zoology, 1958). However, studies that have been done are generally associated with tall (over 200 feet) communications towers. Mortalities associated with tall structures are referred to as tower-kills. These tower-kills have also been known to involve lighted monuments (e.g. the Washington Monument), smoke stacks and airport ceilometers. Most of the reports from the United States come from the eastern and central part of the country. There is no documentation regarding lighted bridges over waterways and the impacts to birds. However, this could be due to birds hitting bridge structures and falling into the water or being removed quickly by scavengers. Therefore, any mortality may go unnoticed.

According to reports the birds most affected by lit towers are the neotropical migratory songbirds, in particular thrushes, vireos, and warblers. According to existing reports, there are two mechanisms for bird mortality that occur at communication towers. The first is when birds flying in poor visibility do not see the structure. Communication towers that are lighted at night for aviation safety may help reduce bird collisions caused by poor visibility, but the lights bring about a second mechanism for mortality. When there is a low cloud ceiling or foggy conditions, lights on a tower refract off water particles in the air creating an illuminated area around the tower. Migrating birds have lost their stellar cues for nocturnal migration in these weather conditions. When passing the lighted area, the increased visibility around the tower may become the strongest cue the birds have for navigation, and thus they tend to remain in the lighted space by the tower. Mortality may occur when they run into the structure and its guy wires, or even other migrating birds as more and more passing birds cram into the relatively small, lighted space. Other birds may fly around in circles around the light source until they become exhausted and fall from the sky.

The exact magnitude of the problem is unknown. The Caltrans report states that on January 22, 1998, in western Kansas, an estimated 10,000 Lapland lonspurs were killed at, and in the vicinity of, three towers and a natural gas pumping facility.

In Florida, a 25-year study on bird mortality associated with a communication tower just north of Lake Iamonia, was conducted by ornithologists stationed at a nearby research station. Over the 25-year period, 42,386 birds were found scattered beneath the tower (*Blinking lights mark scenes of death for birds*, by Jim Cox, Tallahassee Democrat). The Caltrans report states that:

Many other incidents involving up to, and in some cases more than, 1,000 birds are noted in an annotated bibliography prepared by the U.S. Fish and Wildlife Service's (the Service) Office of Migratory Bird Management (Trapp, 1998). In 1979, the Service estimated an annual mortality at around 1.4 million birds (Manville, 1999). Today's conservative estimate is upwards of 4 million birds killed per year.

The bridge is currently lit with flashing red navigational lights on the top of each bridge tower. According to reports, birds are thought to be less sensitive to flashing red lights than to other forms of light. The Caltrans report indicates that bridge maintenance crews have not reported finding any dead birds near the bridge. However, the report further states that it is possible that any existing problem would go unnoticed because the birds could fall in the water or be removed by scavengers.

Lights similar to the ones proposed at the top of the towers, that will shine a beam of light directly into the night sky, are used on the City of Long Beach's Landmark Square Building. The building is located approximately 3 miles to the southeast. The approximately 25-story building has four 3,000-watt Xenon lights on the roof directed straight up. The lights have been in operation since 1991 and operate between sunset and midnight. There have been no reported problems with bird kills.

As stated, the Port of Los Angeles is developed with numerous industrial and port related facilities. With such development there are numerous lights throughout the Port area. These lights are located on/in buildings, cranes, and parking and cargo storage lots. The area surrounding the two towers is well lit. Therefore, the addition of lights directed toward the existing structure will not significantly add to the ambient illumination of the area. However, the high intensity Skytrackers that direct light directly into the night sky will increase the illumination of the night sky above the bridge during inclement weather, which occurs quite frequently within the Los Angeles harbor area. The applicant has not provided any specific documentation regarding the number and type of migratory birds that fly over the area nor have they submitted any substantial information with regards to the impact the high intensity lights or the floodlights will have on the birds that use the area.

The impact to the peregrine should not be significant since the birds nest/roost under the roadway within the bridge girders which will not be illuminated. The Caltrans report states that a peregrine expert and consultant/monitor for the Vincent Thomas Bridge seismic

retrofit project, indicated that the proposed lighting would not adversely impact the peregrines.

Another concern is adverse impacts to fish in the channel. Increased lighting may attract mid-water column dwelling fish, such as bass (calico and spotted bass). This may increase predation by sea lions, night herons, gulls and other predators. According to the applicant all lights will be directed onto the tower structures, except for the Skytrackers, and no lights will be directed over the water. Therefore, the potential impact to fish would be nominal.

At this time Commission staff has not received any written comments from the California Department of Fish and Game or from the U.S. Fish & Wildlife Service. The Dept. of Fish and Game has not had adequate time to adequately review the project. Commission staff has verbally communicated with both the Dept. of Fish and Game and the U.S. Fish & Wildlife Service and they have initially expressed concern with the lighting and the impact the lighting will have on migratory birds and the peregrines.

Although it is not known for certain why birds fly into tall lighted structures there is a significant amount of data that indicates that tall lighted structures cause bird kills. The cumulative impact of illuminating additional structures in a highly developed and lighted area is also not known at this time. However, the additional lights will add to the illumination of the area and may add to the cumulative adverse impacts that lights have on migratory birds and resident birds. Therefore, as a condition of this permit, the high intensity Xenon Skytracker lights located at the top of each tower shall be limited to one night only, between the hours of 9:00 p.m. on December 31, 1999 to 6:00 a.m. on January 1, 2000, until a study is conducted on the migratory birds of the area and the potential impact the high intensity lights will have on the birds and an amendment to this permit has been approved. Furthermore, the study shall be reviewed and approved by the Department of Fish and Game and the U.S. Fish and Wildlife Service, or provide a statement from the agencies stating that no approval is required, prior to the submittal of an amendment. The applicant shall also agree in writing that approval of an amendment for the operation of the Xenon Skytracker lights, or similar skyward projecting lights, will be based on Chapter 3 and Chapter 8 impacts and therefore will not be based on the fact that the applicant will have already expended funds for the installation of the lights. A third condition requiring that if any significant mortality of birds is observed, the lights shall be turned off immediately until the Coastal Commission, the California Department of Fish and Game and the U.S. Fish and Wildlife Service are notified and an appropriate course of action is identified is necessary.

The Commission finds that, only as conditioned by this permit, will the project minimize any substantial adverse environmental impacts and be consistent with Section 30230, 30240 and 30708(a) of the Coastal Act.

D. California Environmental Quality Act

Section 13096 of the Commission's regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(i) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect which the activity may have on the environment.

The proposed project, as conditioned, has been found to be consistent with the Chapter 8 policies of the Coastal Act. All adverse impacts have been mitigated by conditions of approval and there are no feasible alternatives or feasible mitigation measures available which would lessen any significant adverse impact the activity may have on the environment. Therefore, the Commission finds that the proposed project, only as conditioned, is consistent with CEQA and the policies of the Coastal Act.